

**WELLS BLOOMFIELD, LLC**  
2 ERIK CIRCLE, P. O. Box 280 Verdi, NV 89439  
telephone: 775-689-5707  
fax: 775-689-5976  
[www.wellsbloomfield.com](http://www.wellsbloomfield.com)

161

## *SUPPLEMENTAL SERVICE INSTRUCTIONS*

# *ELECTRIC CHARBROILERS*

### **COUNTERTOP MODELS**

**B-40**

**B-44**

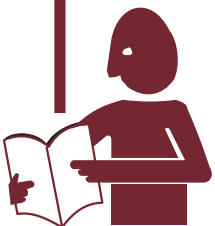
**B-50**

### **BUILT-IN MODELS**

**B-406**

**B-446**

**B-506**



**IMPORTANT:** WELLS BLOOMFIELD, LLC PROPRIETARY INFORMATION.  
DISSEMINATION OF THIS INFORMATION TO ANYONE OTHER THAN  
WELLS AUTHORIZED SERVICE AGENTS IS STRICTLY PROHIBITED.  
TECHNICAL CONTENT OF THIS MANUAL IS DESIGNED FOR  
USE BY QUALIFIED PROFESSIONAL TECHNICIANS ONLY.

PRINTED IN UNITED STATES OF AMERICA

## PRECAUTIONS AND GENERAL INFORMATION



### **WARNING: RISK OF INJURY**

Installation procedures must be performed by a qualified technician with full knowledge of all applicable electrical and plumbing codes. Failure can result in personal injury and property damage.



### **WARNING: ELECTRIC SHOCK HAZARD**

All servicing requiring access to non-insulated electrical components must be performed by a qualified technician.

Some procedures involve exposed live circuits. Use all due caution to avoid contact with live electric circuits. Failure to follow this warning can result in severe electrical shock.



### **CAUTION: RISK OF DAMAGE**

DO NOT connect or energize this appliance until all installation instructions are read and followed. Damage to the appliance will result if these instructions are not followed.

This appliance is intended for use in commercial establishments only.

This appliance is intended to prepare food for human consumption. No other use is recommended or authorized by the manufacturer or its agents.

Operators of this appliance must be familiar with the appliance use, limitations and associated restrictions. Operating instructions must be read and understood by all persons using or installing this appliance.

Cleanliness of this appliance is essential to good sanitation. Read and follow all included cleaning instructions and schedules to ensure the safety of the food product.

Disconnect this appliance from electrical power before performing any maintenance or servicing.

Maintain 2" of water in drip pan at all times during operation. Do not pour water over elements to refill drip pan.

DO NOT splash or pour water on, in or over any controls, control panel or wiring.

DO NOT use water spray or steam jet to clean this appliance. This appliance is not jet stream approved.

The technical content of this manual, including any wiring diagrams, schematics, parts breakdown illustrations and/or adjustment procedures, is intended for use by qualified technical personnel.

Any procedure which requires the use of tools must be performed by a qualified technician.

This appliance is made in the USA. Unless otherwise noted, this appliance has American sizes on all hardware.

## TABLE OF CONTENTS

### GENERAL

Precautions & General Information .....	xi
Specifications .....	1
Features & Operating Controls .....	2

### SERVICING INSTRUCTIONS

Troubleshooting Suggestions .....	4
Prepare the Broiler for Use .....	5
Replace Infinite Switch .....	6
Replace Pivot for Element Head .....	7
Replace heating Element .....	8
Replace Support Rod Spring .....	10

### EXPLODED VIEWS AND SERVICE PARTS

Control Knob Identification .....	11
B-40 and B-406 .....	12
B-44 and B-446 .....	14
B-50 and B-556 .....	16

### WIRING DIAGRAMS & SCHEMATICS

B-40 and B-406 .....	18
B-44 and B-446 .....	20
B-50 and B-556 .....	22

GENERAL

## INTRODUCTION

This manual contains information needed to properly service and repair Wells Bloomfield electric charbroilers. This manual applies to the following Wells models:

B-40(6), B-44(6), B-50(6)

For installation, operation and maintenance instructions, refer to Operation Manual p/n 303672 (countertop models), or Operation Manual p/n 303673 (built-in models).

## SPECIFICATIONS

MODEL	ELEMENT	VOLTS	KW	AMPS PER LEG 3Ø				AMPS 1Ø	POWER CORD (countertop only)
				L1	L2	L3	NEUT		
B-40 B406	SINGLE ASSEMBLY	208	5.5	12.9	12.9	22.4	N/A	26.0	OPTIONAL NEMA 6-30P
		240	5.5	11.2	11.2	19.4	N/A	22.5	
B-44 B-446	SINGLE ASSEMBLY	208	5.5	11.5	22.4	14.4	N/A	26.0	NOT SUPPLIED
		240	5.5	10.0	19.5	12.5	N/A	22.5	
B-50 B-506	DUAL ASSEMBLIES	208	11.0	30.0	30.0	30.0	N/A	-	NOT SUPPLIED
		240	11.0	26.0	26.0	26.0	N/A	45.0	

## FEATURES & OPERATING CONTROLS

### COUNTERTOP ELECTRIC CHARBROILER

**IMPORTANT:**

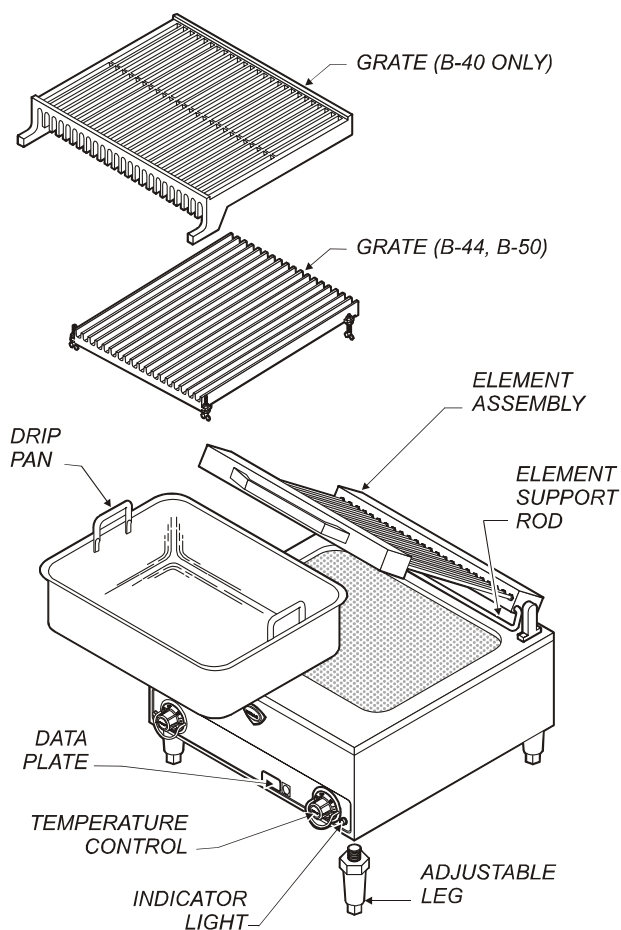
B-40 grate mounts above the element.  
B-44 and B-50 grates can mount above or below the elements.  
Always remove a top-mounted grate before lifting the element assembly.

**IMPORTANT:**

Remember to dis-engage the support rod before lowering element assembly.

**IMPORTANT:**

DO NOT pour water over elements to refill drip pan.



ITEM	COMMENT
<b>TEMPERATURE CONTROL</b>	The char-broiler is INFINITE SWITCH CONTROLLED. Power is applied to the heating elements in a timed sequence based on the control knob position.
<b>INDICATOR LIGHT</b>	Light will glow when the infinite switch is in any position other than <i>OFF</i> .
<b>HEATING ELEMENT ASSEMBLY</b>	The char-broiler element assembly may be raised for cleaning, or to add water to the drip pan. Use the handle to manually lift the grate. It is held the "up" position by a support rod which automatically engages as the element is raised.
<b>ELEMENT GUARD/ GRATE</b>	The grate is designed to protect the individual elements from food contact and spatula abrasion, resulting in prolonged element life and reduced carbonization. The grate is easily removed for cleaning.
<b>ELEMENT SUPPORT ROD</b>	Holds element assembly in up position. Engages automatically when the element assembly is raised. Must be disengaged manually before lowering elements.
<b>DRIP PAN</b>	The heavy-duty removable drip pan is located under the element assembly. The drip pan catches food particles and grease drippings during broiler operation. Maintain 2 inches of water in the drip pan at all times during operation of the broiler. The drip pan is easily removed for cleaning.
<b>DATA PLATE</b>	Gives manufacturer, make, model and serial number. Also voltage and phase information, and agency approvals.
<b>ADJUSTABLE LEGS</b>	The char-broiler is equipped with adjustable 4" legs.

## FEATURES & OPERATING CONTROLS (continued)

### BUILT-IN ELECTRIC CHARBROILER

#### IMPORTANT:

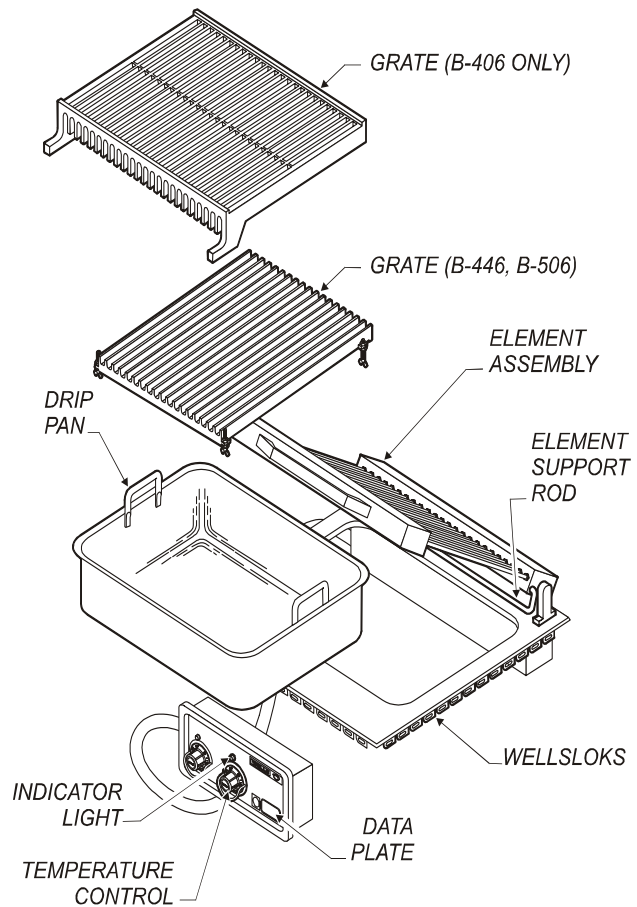
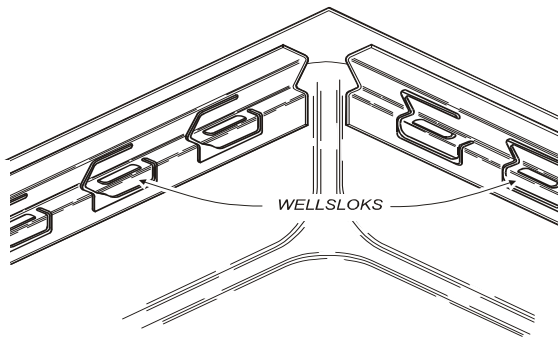
B-406 grate mounts above the element.  
B-446 and B-506 grates can mount above or below the elements.  
Always remove a top-mounted grate before lifting the element assembly.

#### IMPORTANT:

Remember to dis-engage the support rod before lowering element assembly.

#### IMPORTANT:

DO NOT pour water over elements to refill drip pan.



ITEM	COMMENT
TEMPERATURE CONTROL	The char-broiler is INFINITE SWITCH CONTROLLED. Power is applied to the heating elements in a timed sequence based on the control knob position.
INDICATOR LIGHT	Light will glow when the infinite switch is in any position other than <i>OFF</i> .
HEATING ELEMENT ASSEMBLY	The char-broiler element assembly may be raised for cleaning, or to add water to the drip pan. Use the handle to manually lift the grate. It is held the "up" position by a support rod which automatically engages as the element is raised.
ELEMENT GUARD/ GRATE	The grate is designed to protect the individual elements from food contact and spatula abrasion, resulting in prolonged element life and reduced carbonization. The grate is easily removed for cleaning.
ELEMENT SUPPORT ROD	Holds element assembly in up position. Engages automatically when the element assembly is raised. Must be disengaged manually before lowering elements.
DRIP PAN	The heavy-duty removable drip pan is located under the element assembly. The drip pan catches food particles and grease drippings during broiler operation. Maintain 2 inches of water in the drip pan at all times during operation of the broiler. The drip pan is easily removed for cleaning.
DATA PLATE	Gives manufacturer, make, model and serial number. Also voltage and phase information, and agency approvals.
WELLSLOKS	The broiler is equipped with WELLSLOKS, uniquely designed turnout tabs, which help secure the broiler to the countertop.

## SERVICING INSTRUCTIONS

### TROUBLESHOOTING SUGGESTIONS

SYMPTON	POSSIBLE CAUSE	SUGGESTED REMEDY
Won't heat- - no indicator lights	Not plugged in, or Circuit breaker tripped.	Check plug Check / reset circuit breaker
One or more section won't heat—or not hot enough	Temperature control not set	Set temperature control knob to desired temperature
	240V unit run on 208V	Verify proper voltage
	Damaged infinite switch	Check/replace infinite switch Check/repair wiring and terminals
	Damaged heating element(s)	Check/replace heating elements Check/repair wiring and terminals
One or more section too hot	Temperature control not set	Set temperature control knob to desired temperature
	208V unit run on 240V	Verify proper voltage
	Damaged infinite switch	Check/replace infinite switch
Element assy loose, or difficult to raise or lower	Damaged hinge	Repair/replace hinge
Element assy does not latch in up position	Damaged support rod assembly	Clean/repair support rod assembly Replace support rod spring

SERVICING



## PREPARE THE CHAR-BROILER FOR USE

When using the broiler for the first time, and after major repairs, wipe the entire unit with a clean damp cloth or sponge and mild detergent. Rinse thoroughly clean water. Dry with a soft clean cloth.

Remove the GRATE and raise the ELEMENT ASSEMBLY.

Install the DRIP PAN and add 2" (5cm) of tap water.

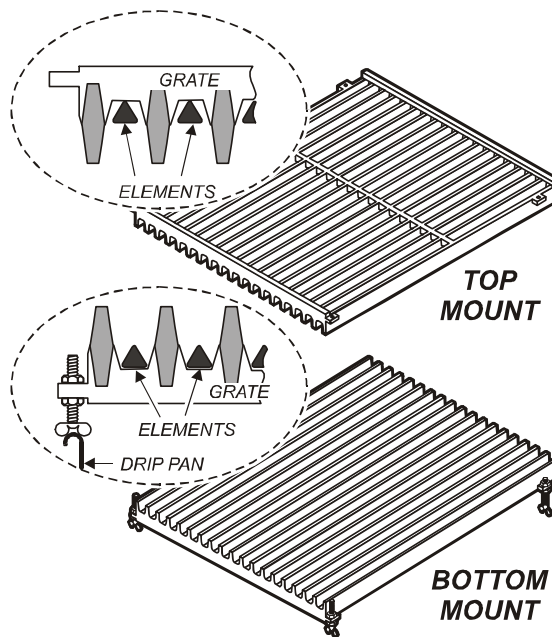
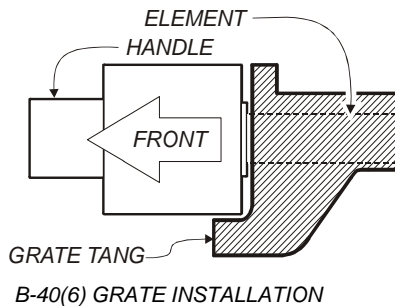
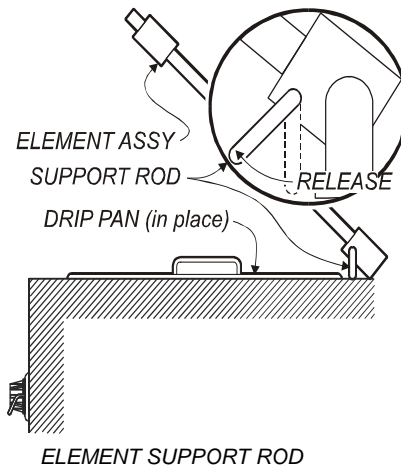
Release the ELEMENT SUPPORT ROD by lifting the element assembly slightly, then pulling the lower portion of the support rod forward. Gently lower the ELEMENT ASSEMBLY.

**MODEL B-40(6):** Grate must be installed ABOVE elements. Install the GRATE, front edge first. The TANGS of the grate go *DOWN* and point toward the *FRONT*. The grooves on the underside of the grate align with the elements. The rear edge of the grate can now be lowered until it rests firmly on the elements.

**MODELS B-44(6) and B-50(6):** Grate(s) can be installed above or below the elements.

**ABOVE:** Gently lower grate over elements. The end with flush tabs goes toward the front.

**BELOW:** Install one wing bolt in each tab. The notch in the wing rests on the lip of the drip pan. The end with flush tabs must go toward the front. Adjust the wing bolts so that, when the element assembly is lowered, the top of the element is 1/4" (6mm) below the top of the grate fins.



B-44(6) and B-50(6) GRATE INSTALLATION



## CAUTION: HOT SURFACE

Exposed surfaces can be hot to the touch and may cause burns.

**IMPORTANT:** DO NOT attempt to raise the element assembly without first removing the grate. Damage to the hinges will result. Such damage is **NOT** covered by warranty.

**IMPORTANT:** Allow drip pan to cool before removing from the broiler.

DO NOT operate the broiler without the drip pan installed. DO NOT operate the broiler without 2" (5cm) of water in the drip pan.

**IMPORTANT:** DO NOT attempt to lower the element assembly without first releasing the support rod. Damage to the hinges will result. Such damage is **NOT** covered by warranty.

## SERVICING INSTRUCTIONS (continued)



### CAUTION: HOT SURFACE

Exposed surfaces can be hot to the touch and may cause burns.

SERVICING

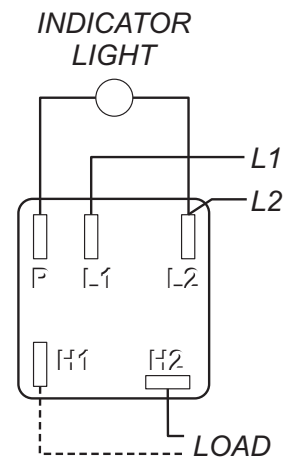
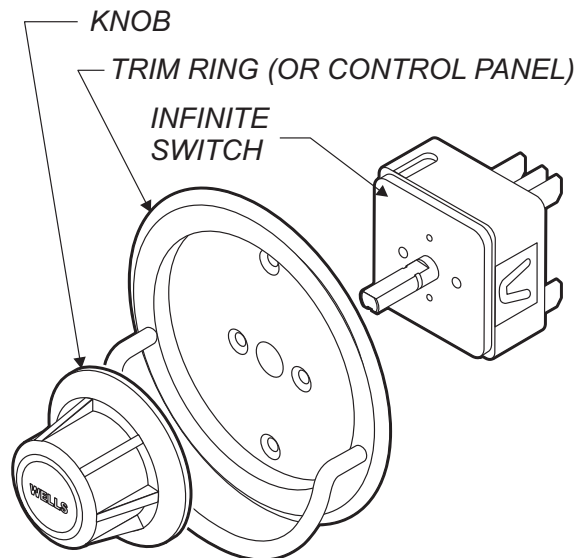
### REPLACE INFINITE SWITCH

#### COUNTERTOP UNITS:

1. Disconnect unit from electric power and allow to cool.
2. Remove control knob. Remove screws holding trim ring to cabinet. Withdraw trim ring and switch.
3. Note orientation of switch to trim ring. Mark location of wires on switch. Remove wires from switch. Remove and discard infinite switch.
4. Mount new switch to trim ring, being careful to maintain proper orientation. Connect wiring to switch. Remount trim ring and switch in cabinet.
5. Reconnect to electric power and test for proper operation.

#### BUILT-IN UNITS:

1. Disconnect unit from electric power and allow to cool.
2. Remove control knob. Remove screws holding control panel to cabinet. Withdraw control panel and switches.
3. Note orientation of switch on control panel. Mark location of wires on switch. Remove wires from switch. Remove and discard infinite switch.
4. Mount new switch to panel, being careful to maintain proper orientation. Connect wiring to switch. Remount control panel and switches into cabinet.
5. Reconnect to electric power and test for proper operation.





## REPLACE PIVOT FOR ELEMENT ASSEMBLY

1. Disconnect unit from electric power and allow to cool.
2. Support the element head near the pivot to be replaced.  
Remove the rear element cover.  
Note and mark the location of the supply wires to the elements.  
Disconnect the supply wires from the elements.
3. Remove the pivot cover. Store the pivot cover in a safe place.  
Withdraw the element supply wires from the pivot.  
Remove the screws holding the pivot to the cabinet. Withdraw the old pivot.
4. Clean all old sealant from the cabinet at the pivot.  
Apply a thin coat of high-temp food-grade lubricant to the pin of the new pivot.  
Apply food-grade silicone sealant to the bottom of the pivot.  
Slide the pin of the pivot into the element head assembly, then attach the pivot to the cabinet.
5. Thread the element supply wires through the pivot and re-connect to the elements.  
Reattach the pivot cover. For pivots with wires, be sure insulation for pivot cover screw is in place.  
Reattach the rear element cover.
6. Reconnect to electric power and test for proper operation.

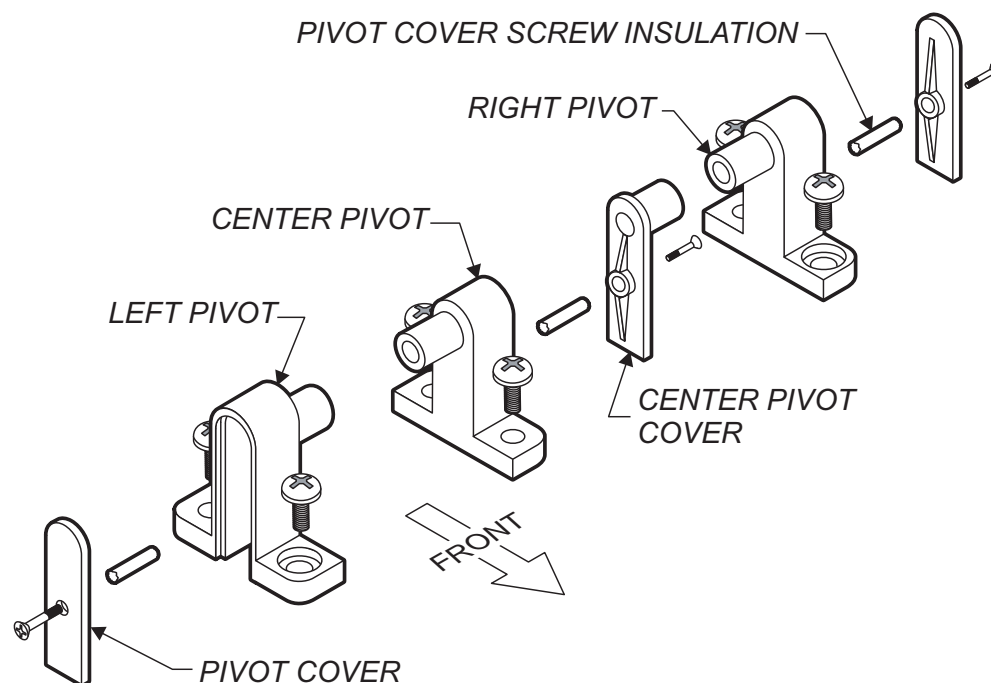


### CAUTION: HOT SURFACE

Exposed surfaces can be hot to the touch and may cause burns.

**IMPORTANT:** DO NOT attempt to raise the element assembly without first removing the grate. Damage to the hinges will result. Such damage is **NOT** covered by warranty.

**IMPORTANT:** DO NOT attempt to lower the element assembly without first releasing the support rod. Damage to the hinges will result. Such damage is **NOT** covered by warranty.



**NOTE:** B-50(6) dual pivot shown. Other units do not use the center pivot components. Pivot cover screw insulation is used, where wiring passes through the pivot, to minimize abrasion and chafing of the power wires.

## SERVICING INSTRUCTIONS (continued)



### CAUTION: HOT SURFACE

Exposed surfaces can be hot to the touch and may cause burns.

**IMPORTANT:** DO NOT attempt to raise the element assembly without first removing the grate. Damage to the hinges will result. Such damage is **NOT** covered by warranty.

**IMPORTANT:** DO NOT attempt to lower the element assembly without first releasing the support rod. Damage to the hinges will result. Such damage is **NOT** covered by warranty.

### SUGGESTION:

At the rear element connections, install upper group of jumpers first, then install lower group. Installing jumpers in this order will ease accessibility conflicts.

### IMPORTANT:

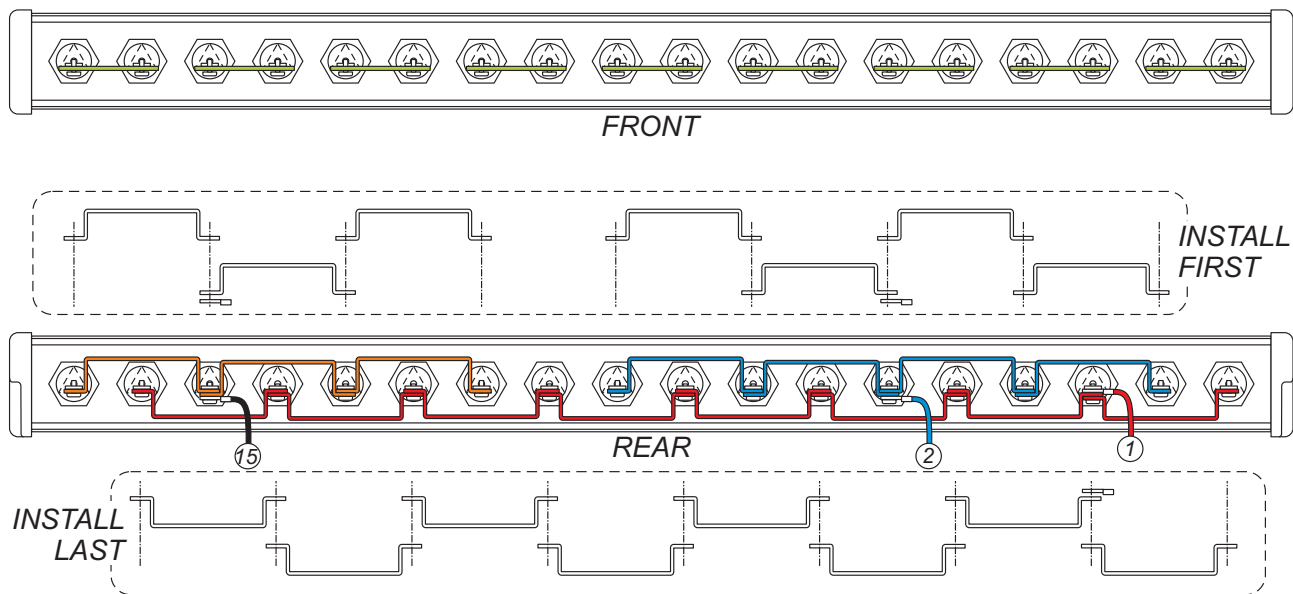
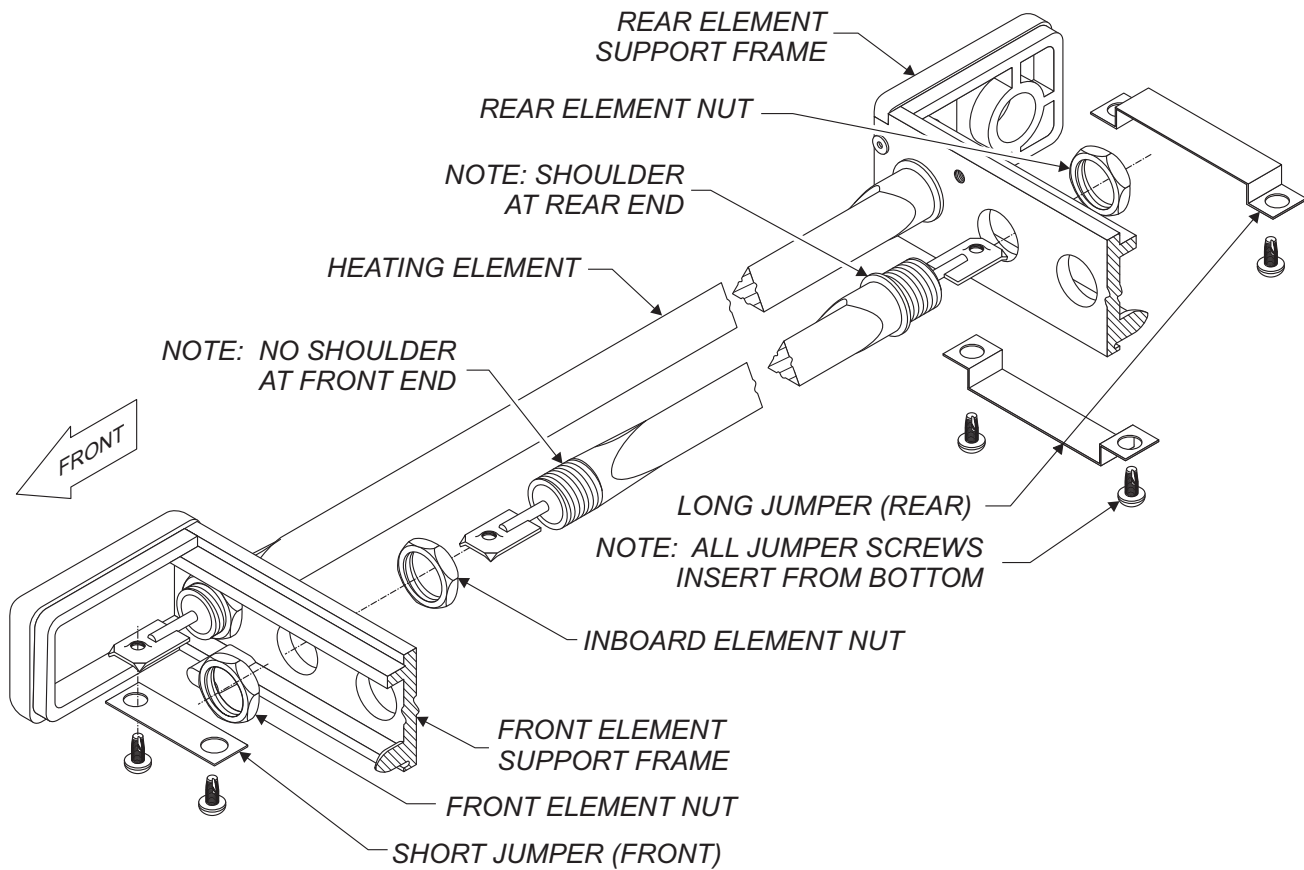
Review page 7 for procedure on reinstalling pivots.

### REPLACE HEATING ELEMENT

1. Disconnect unit from electric power and allow to cool. Remove grate.
2. Remove front and rear element covers. Note location of jumpers and wires.  
**SUGGESTION:** Removing a pivot will allow the element head to be tipped on its side for better access to the element connection screws.
3. Disconnect jumpers and wires from element to be removed. Remove short jumpers from the front of all elements. Remove element nuts from the front end of all elements. Slide the front element support frame off of the elements.
4. Remove the rear element nut from all elements to be replaced. Withdraw the old element from the rear element support frame and discard.
5. Apply a small amount of anti-sieze to the element threads, then attach the element to the rear element support frame.  
**NOTE:** The element mounts such that the end with the shoulder is positioned at the rear, the "flat" of the element is down, and the electrical connection pad is toward the bottom.
6. Examine all rear elements for proper alignment, and all rear element nuts for tightness.
7. Thread an element nut on the front end of the new element. Run the nut inboard until a single thread remains exposed. Examine all the other inboard element nuts to verify that only a single thread remains exposed on each.
8. Slide the front element support frame over the elements.  
**NOTE:** Position front element support frame such that the cover mounting holes on its face are at the top, and the edge with the cover mounting slot and threaded tabs is at the bottom. Loosely reinstall all front element nuts. Adjust front and inboard element nuts until the front and rear element support frames are the same distance apart on right and left ends. Tighten front and inboard element nuts evenly.
9. Reconnect all jumpers and wiring. Reinstall element covers. If any pivots were removed or loosened, be sure element support bar is fully forward before reinstalling the element assembly on the pivots.
10. Reconnect to electric power and test for proper operation. Reinstall grate.

# SERVICING INSTRUCTIONS (continued)

SERVICING



NOTE: B-44(6) shown. B-50(6) utilizes two identical element heads. B-40(6) is similar.

## SERVICING INSTRUCTIONS (continued)



### CAUTION: HOT SURFACE

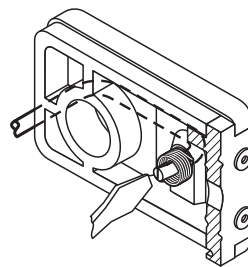
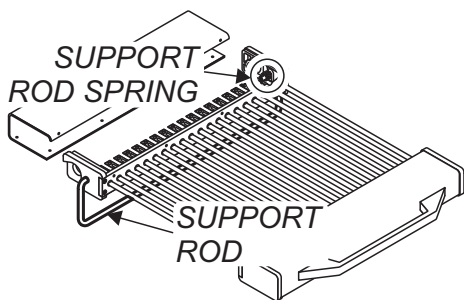
Exposed surfaces can be hot to the touch and may cause burns.

**IMPORTANT:** DO NOT attempt to raise the element assembly without first removing the grate. Damage to the hinges will result. Such damage is **NOT** covered by warranty.

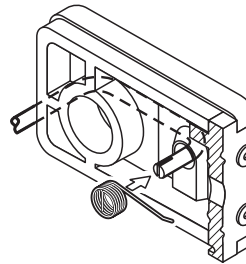
**IMPORTANT:** DO NOT attempt to lower the element assembly without first releasing the support rod. Damage to the hinges will result. Such damage is **NOT** covered by warranty.

### REPLACE SUPPORT ROD SPRING

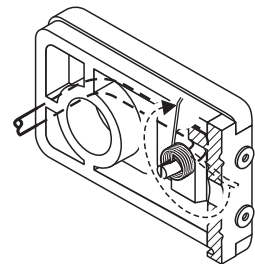
1. Disconnect unit from electric power and allow to cool. Remove grate.
2. Remove rear element cover.  
Remove one pivot, then slide the element head off of the other pivot.
3. Use a flat blade screwdriver to pry open the split end of the support bar. Withdraw and discard all segments of the broken spring.
4. Swing the support rod to the rear until the slot in the rod's split end is vertical.
5. Slide the new spring into the support rod slot. The long finger must be toward the outside and pointing toward the front.
6. Position the spring so that the short finger is fully seated in the support rod slot. Then, use pliers to pinch the split end, capturing the spring.
7. Rotate the long finger of the spring clockwise until it is captured by the vertical walls at the back and side of the frame support casting.
8. Swing the support rod forward until it is against the elements, then reinstall the element head on its pivots. Reinstall pivot.
9. Test the support rod for proper operation. It should spring into position to support the element head when the head is raised.
10. Reinstall rear element cover.
11. Reconnect unit to electric power and test for proper operation. Reinstall grate.



REMOVE  
OLD SPRING



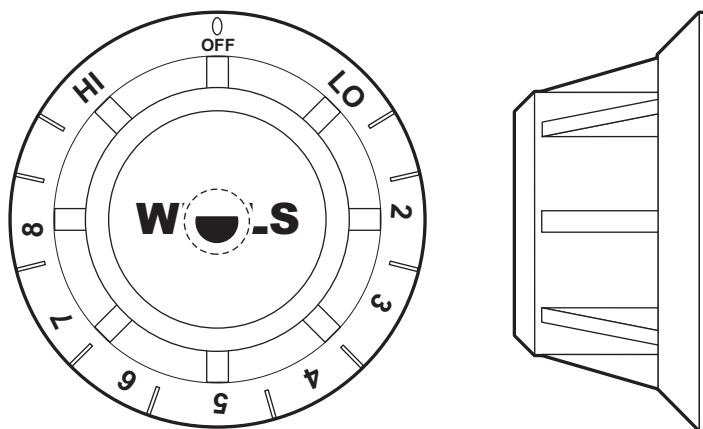
INSTALL  
NEW SPRING



TENSION  
NEW SPRING

## CONTROL KNOB IDENTIFICATION

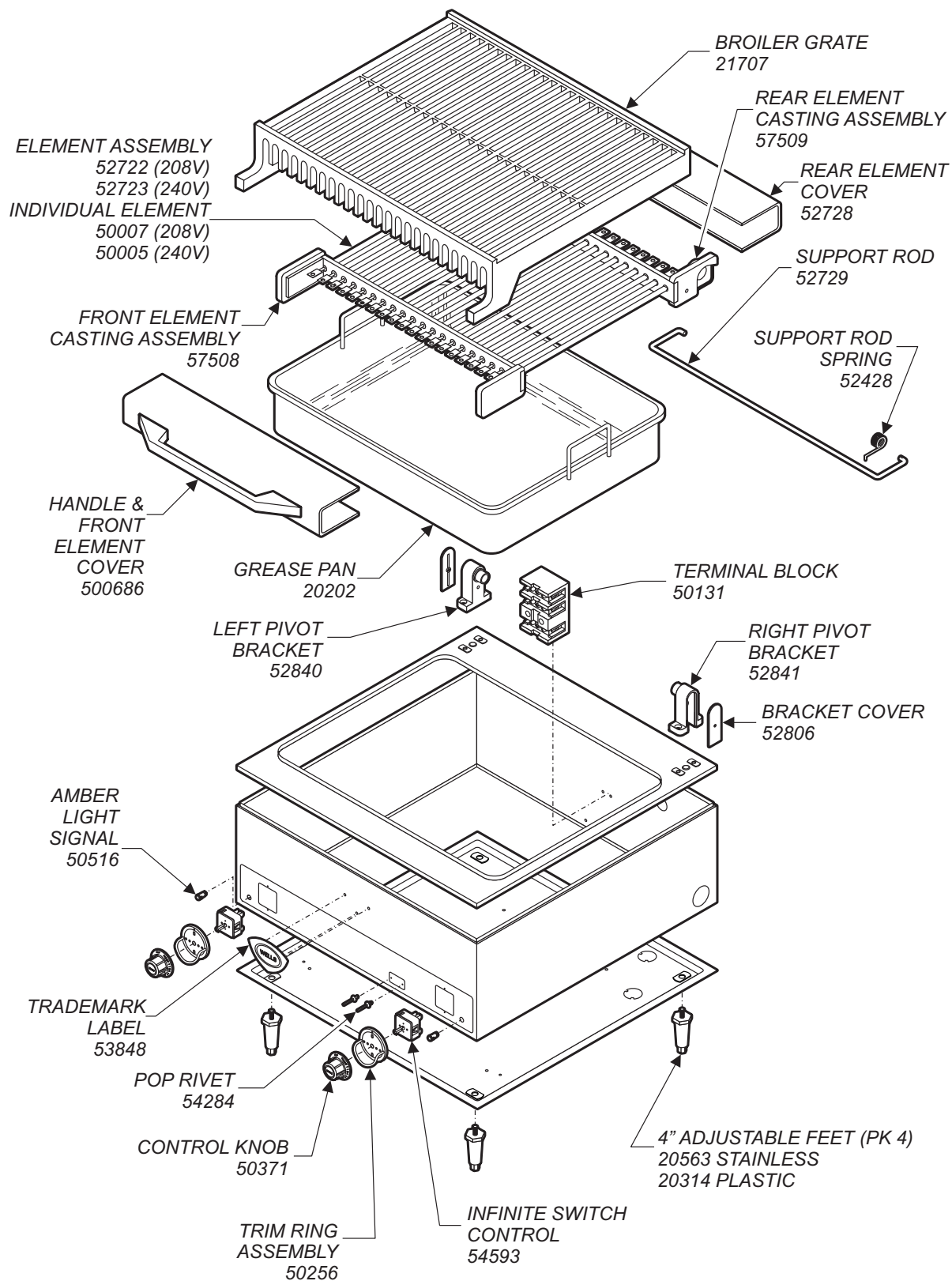
All versions of the Wells Electric Char-Broiler use control knob p/n 50371.



EXPLODED VIEWS

## EXPLODED VIEWS & SERVICE PARTS

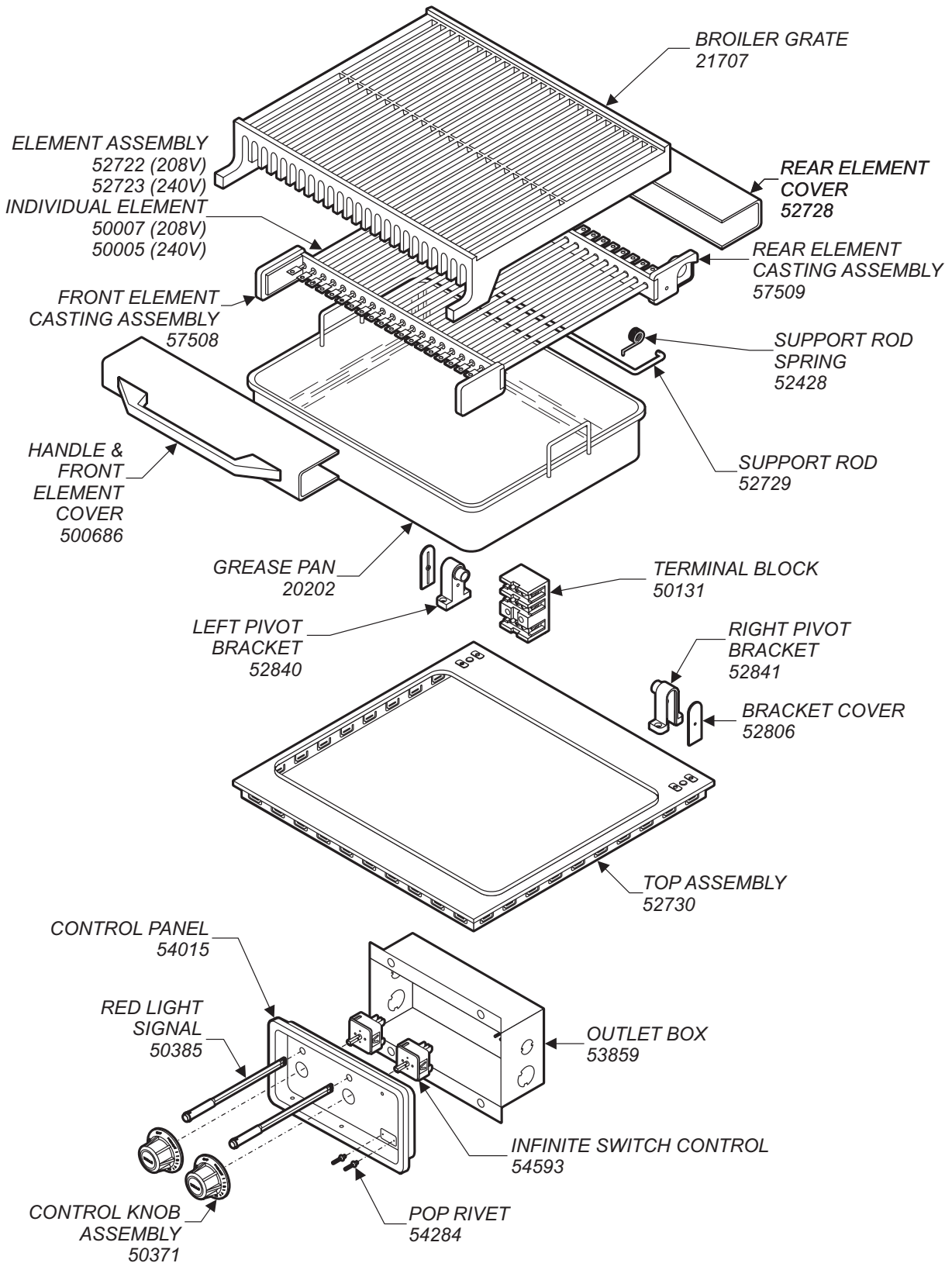
### B-40 COUNTERTOP CHAR-BROILER





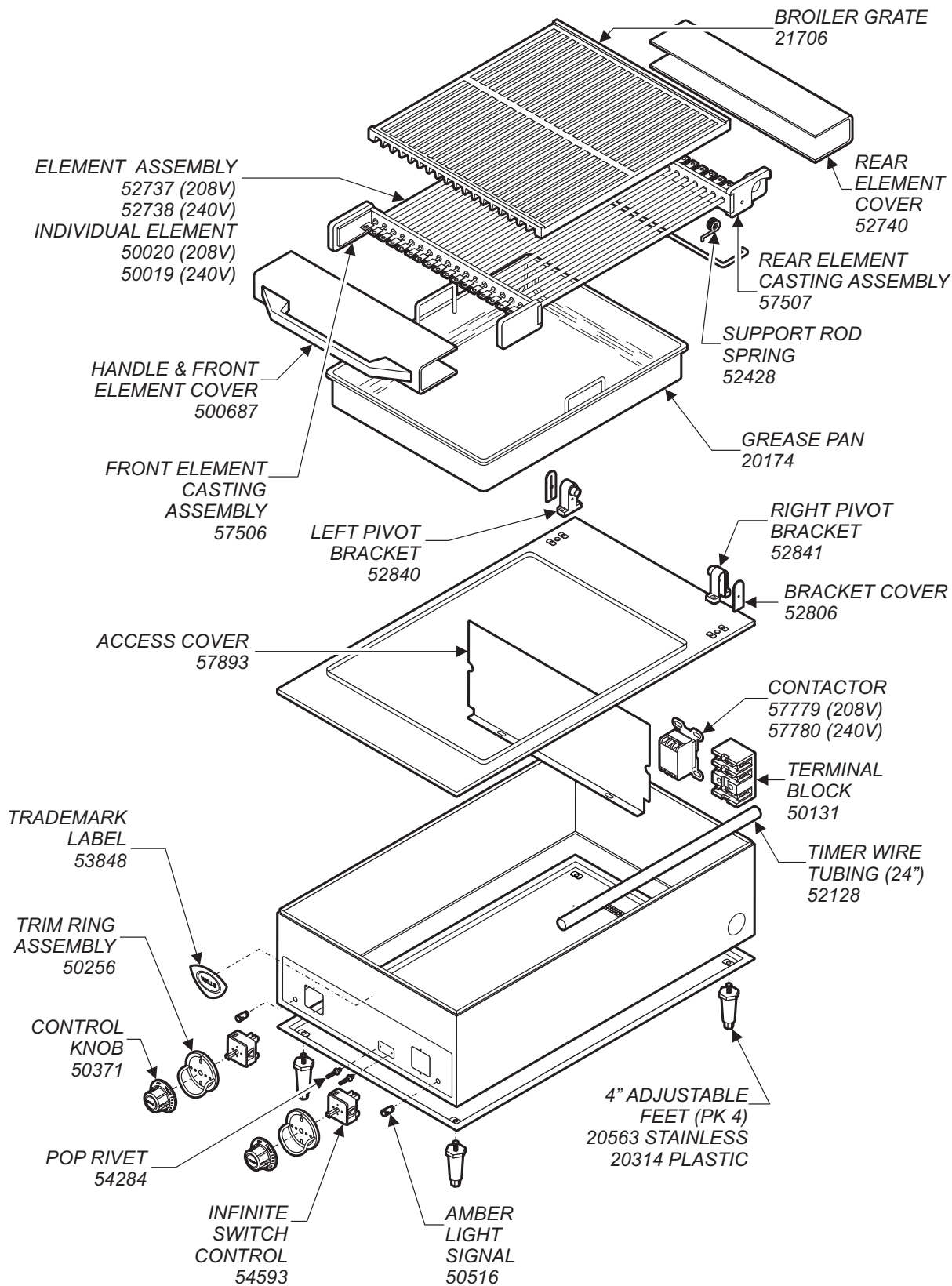
## EXPLODED VIEWS & SERVICE PARTS (continued)

### B-406 BUILT-IN CHAR-BROILER



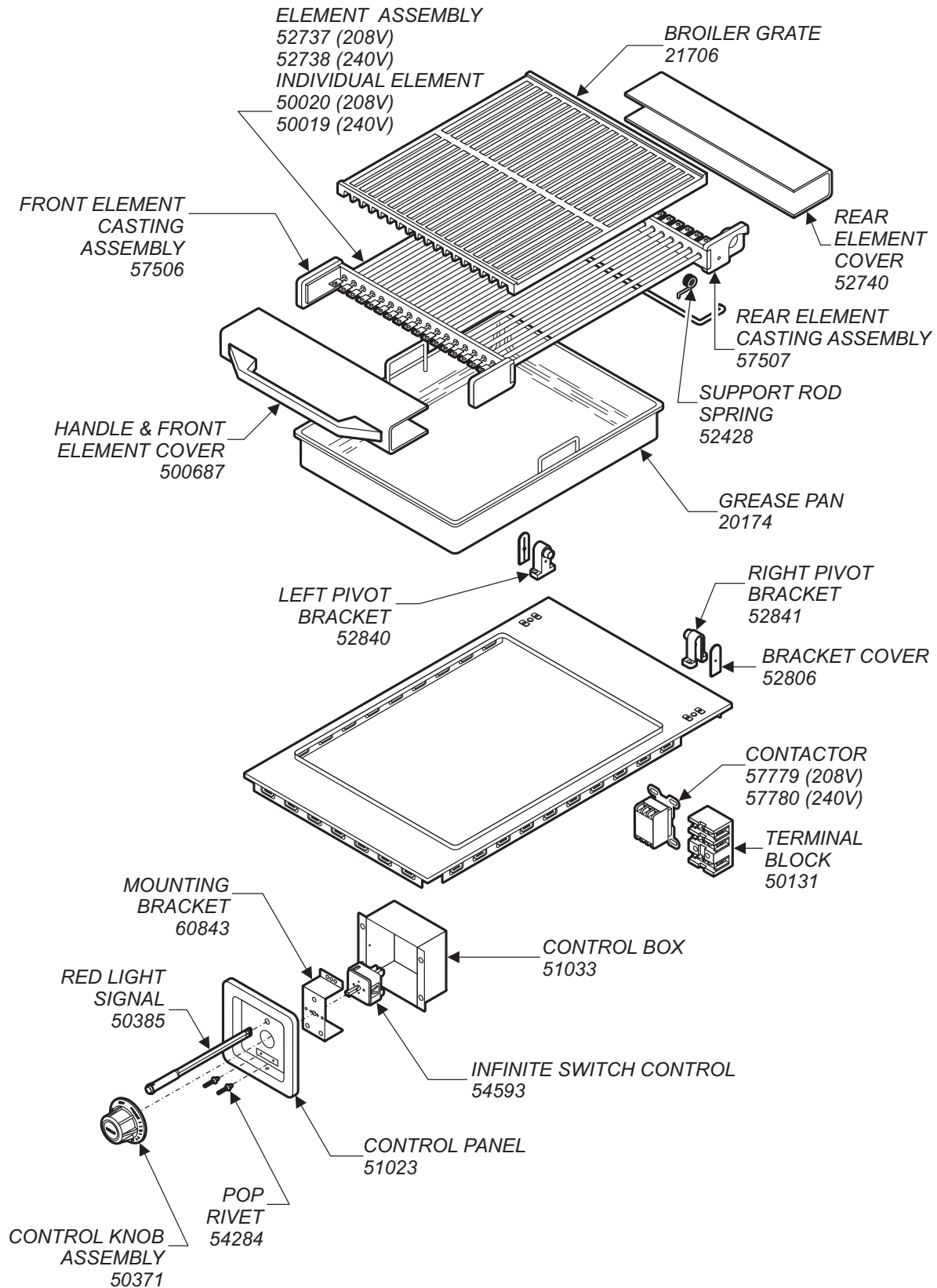
## EXPLODED VIEWS & SERVICE PARTS (continued)

### B-44 COUNTERTOP CHAR-BROILER



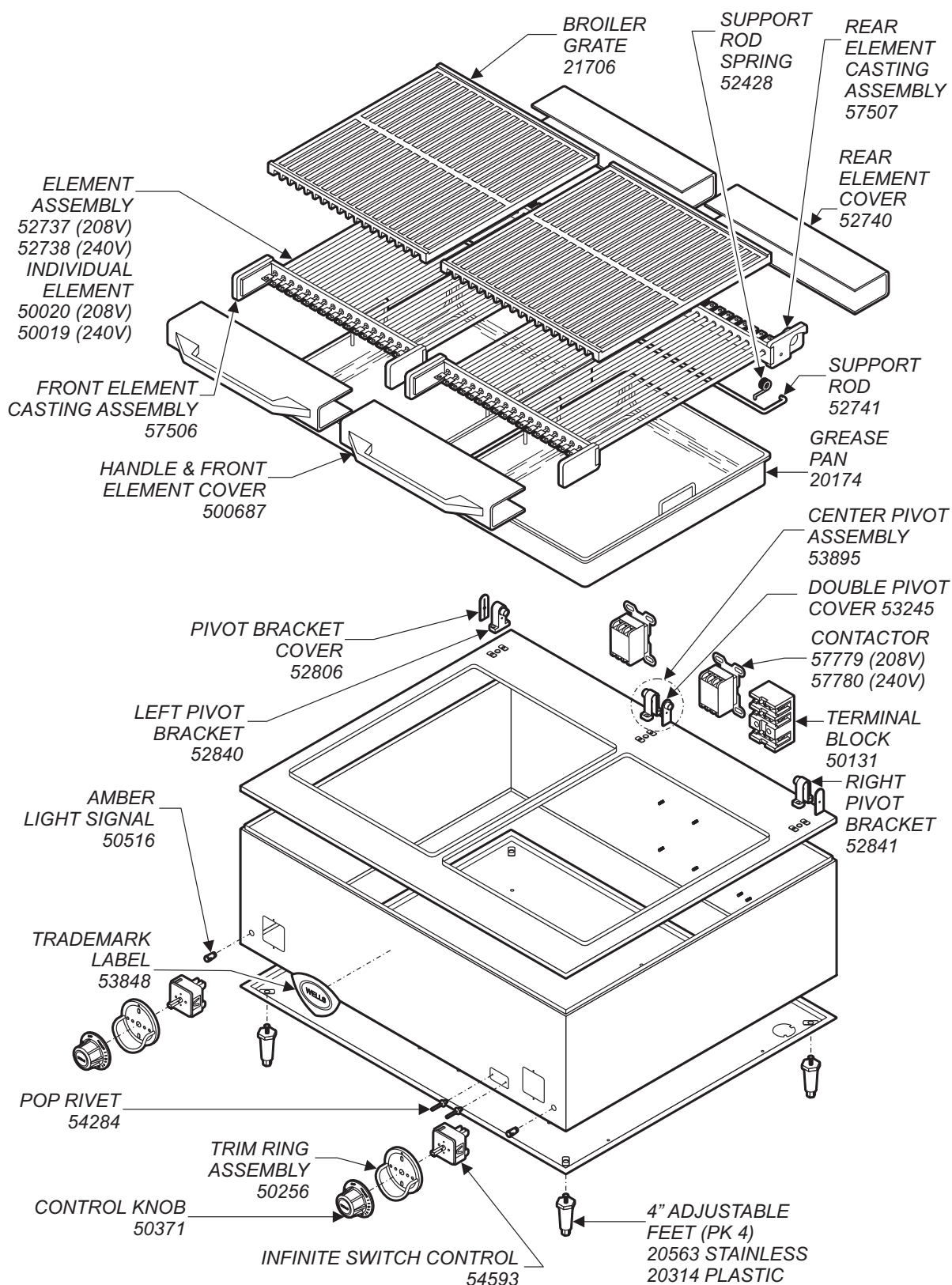
## EXPLODED VIEWS & SERVICE PARTS (continued)

### B-446 BUILT-IN CHAR-BROILER



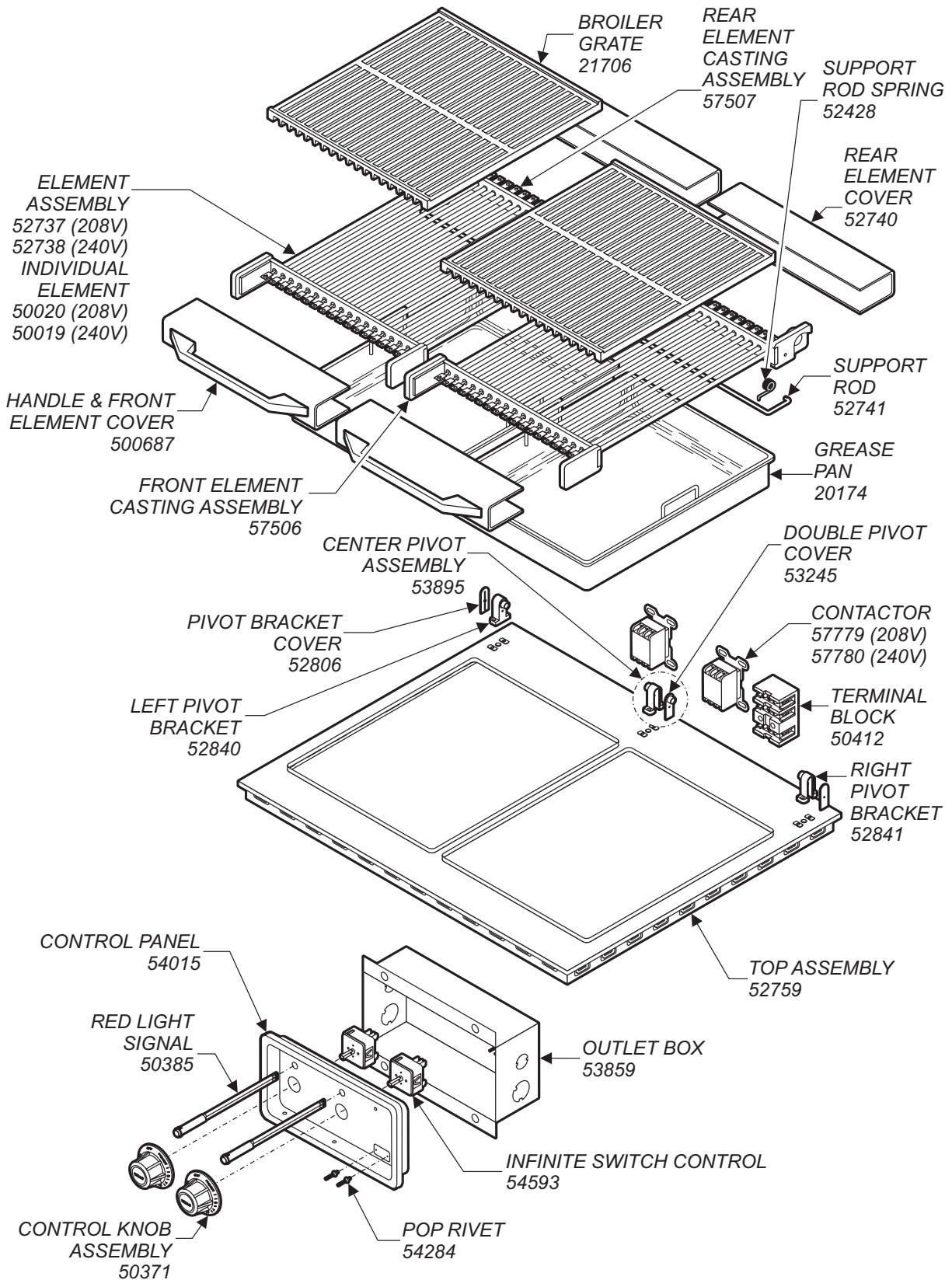
## EXPLODED VIEWS & SERVICE PARTS (continued)

### B-50 COUNTERTOP CHAR-BROILER



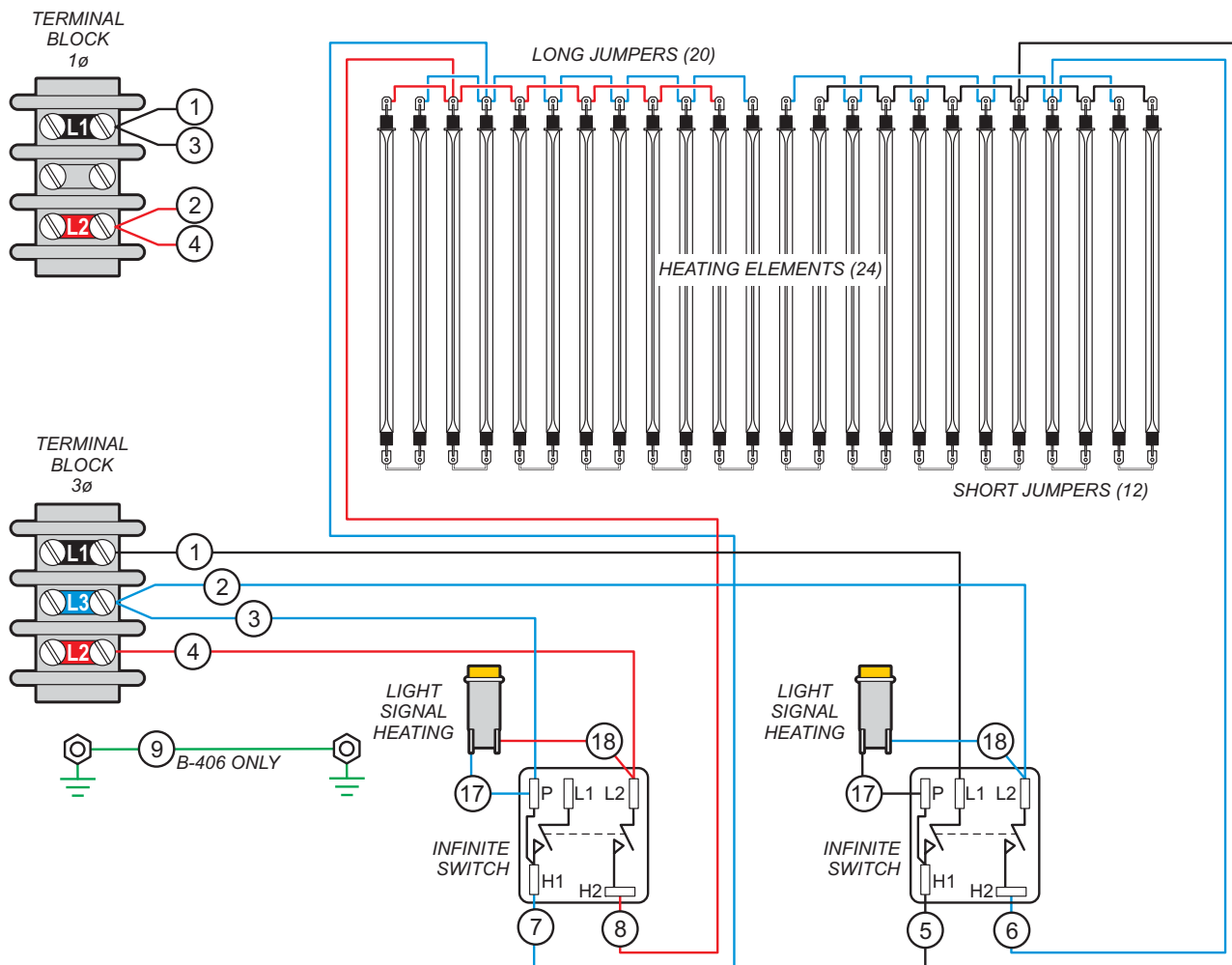
## EXPLODED VIEWS & SERVICE PARTS (continued)

### B-506 BUILT-IN CHAR-BROILER

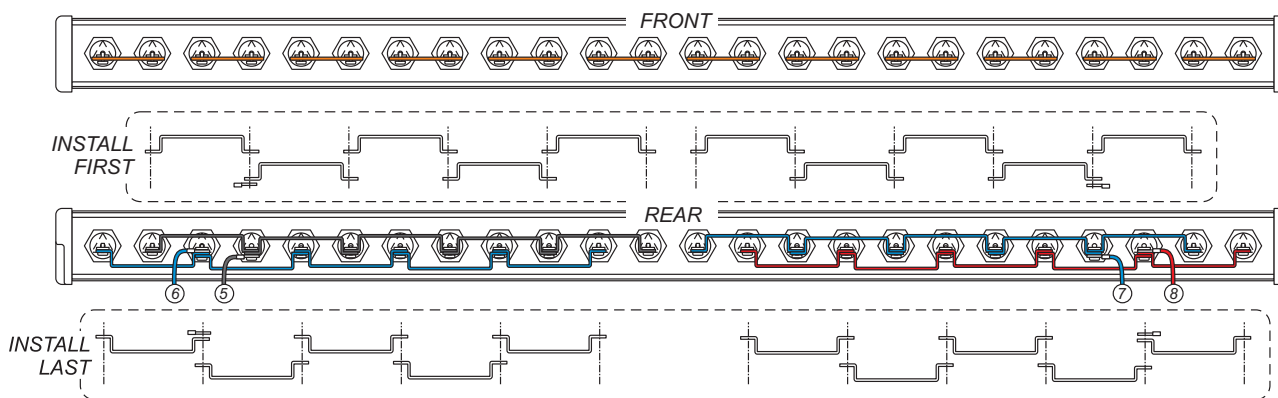




# WIRING DIAGRAMS



## JUMPER INSTALLATION



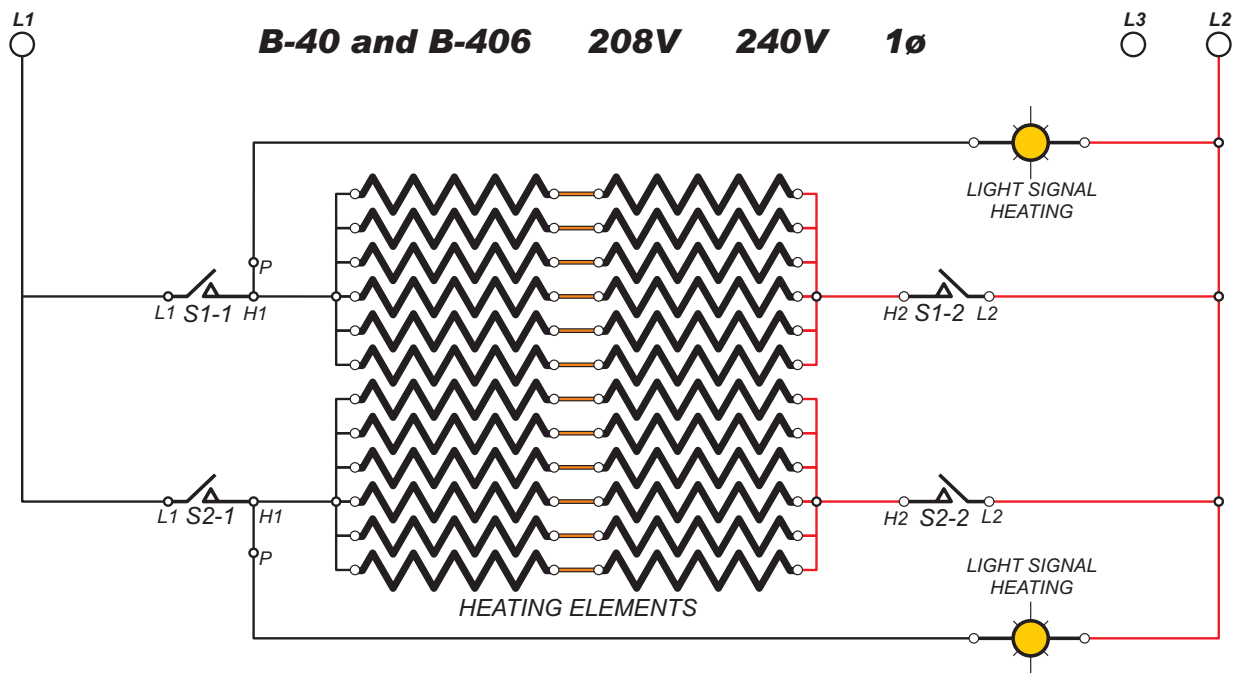
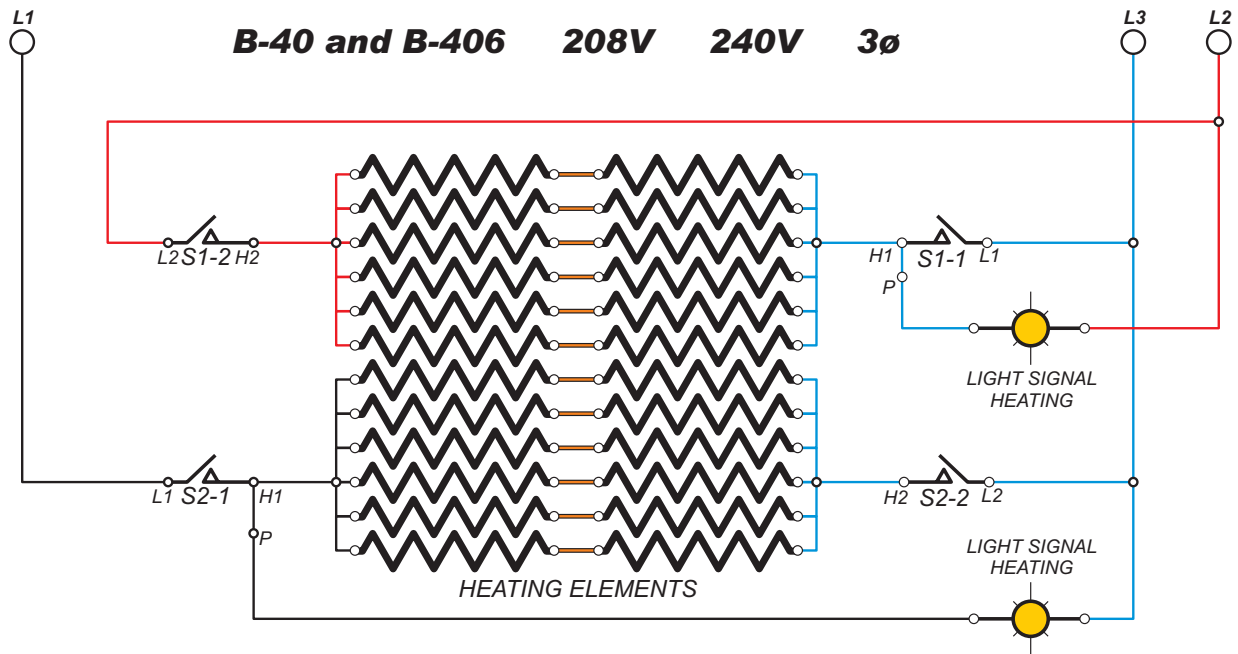
**B-40 and B-406**  
**208V, 240V**

p/n 31269 issue I

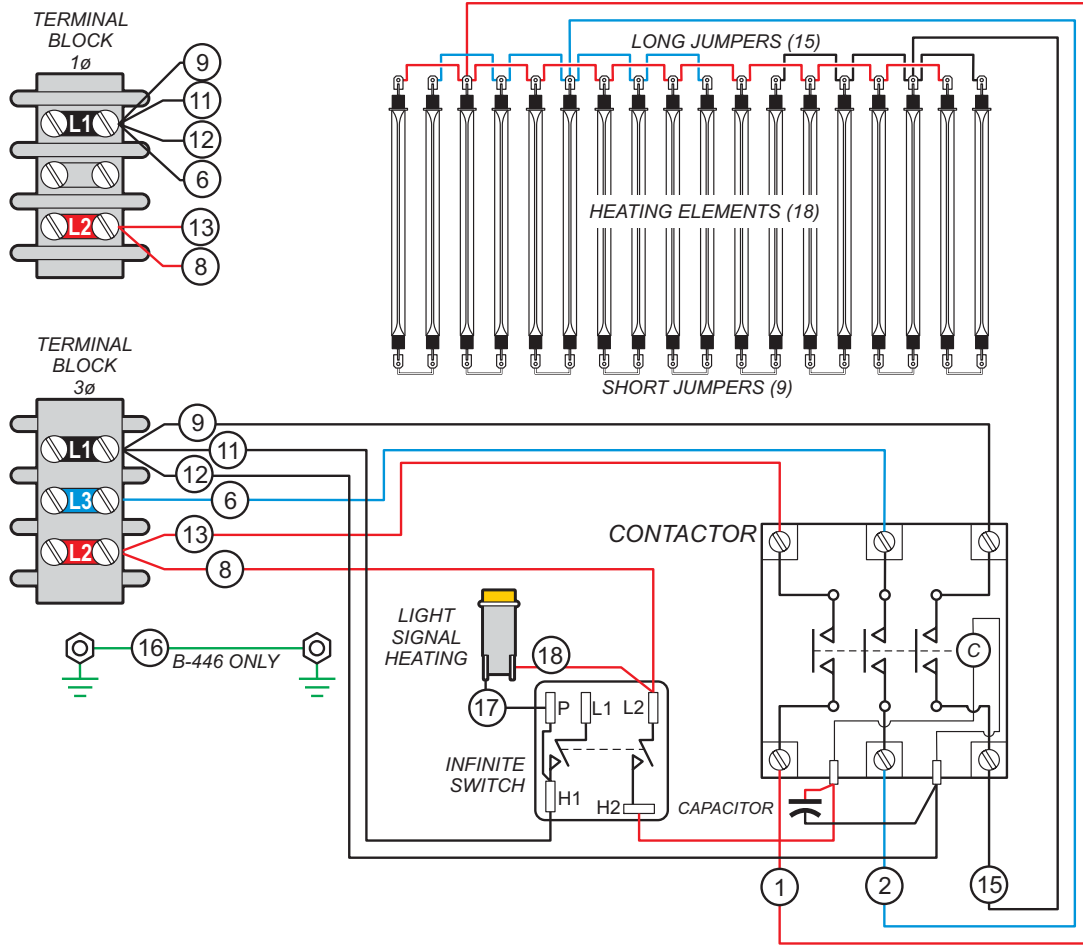
VOLTS	KW	NOMINAL AMPS PER LINE			
		AMPS 3ø			AMPS 1ø
		L1	L2	L3	
208	5.4	12.9	12.9	24.4	26.0
240	5.4	11.2	11.2	19.4	22.5



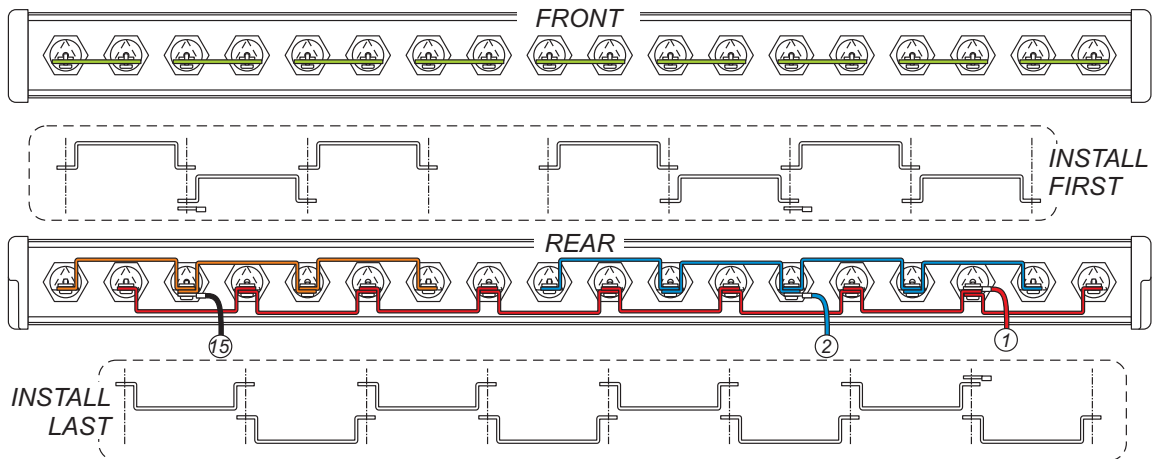
## WIRING DIAGRAMS (continued)



## WIRING DIAGRAMS (continued)



### JUMPER INSTALLATION

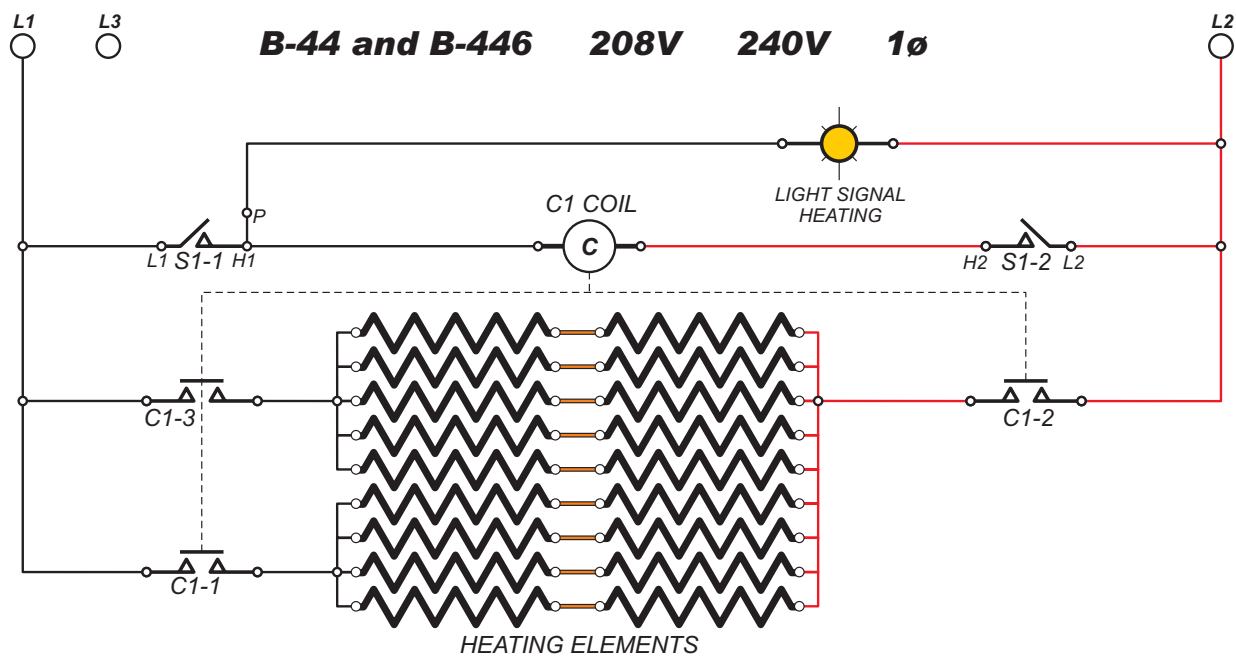
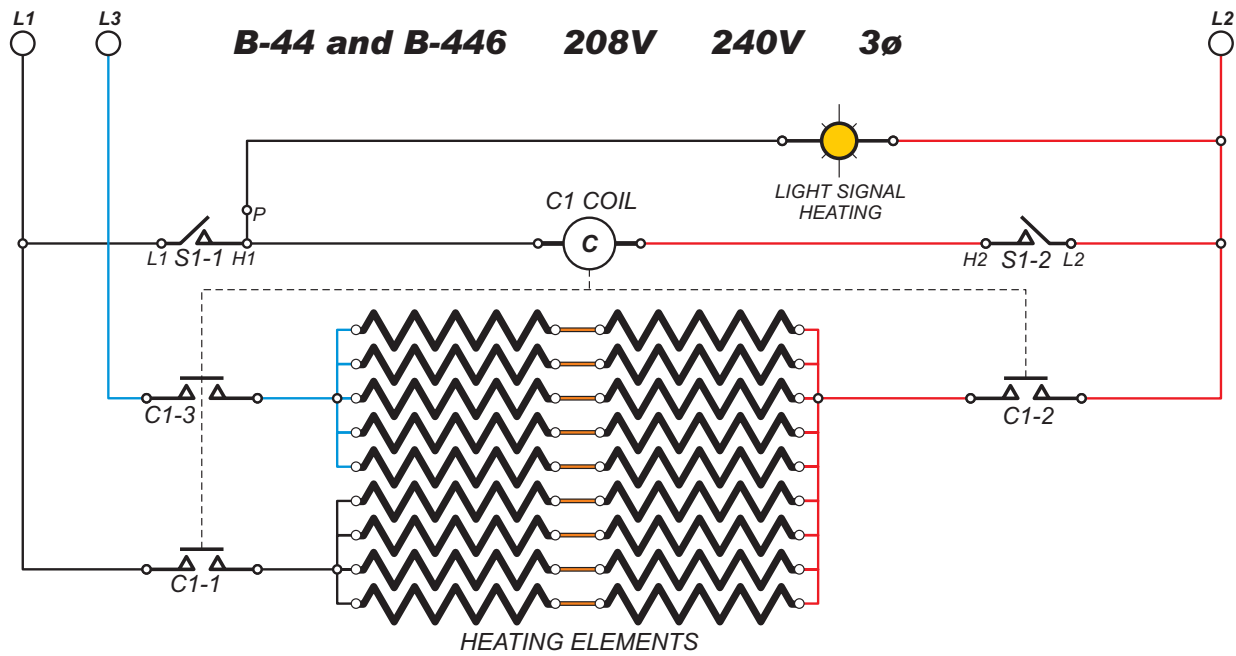


**B-44 and B-446**  
**208V, 240V**

p/n 31278 issue M

VOLTS	KW	NOMINAL AMPS PER LINE				
		AMPS 3Ø			AMPS 1Ø	
		L1	L2	L3		
208	5.5	11.5	22.4	14.4	26.0	
240	5.5	10.0	19.5	12.5	22.5	

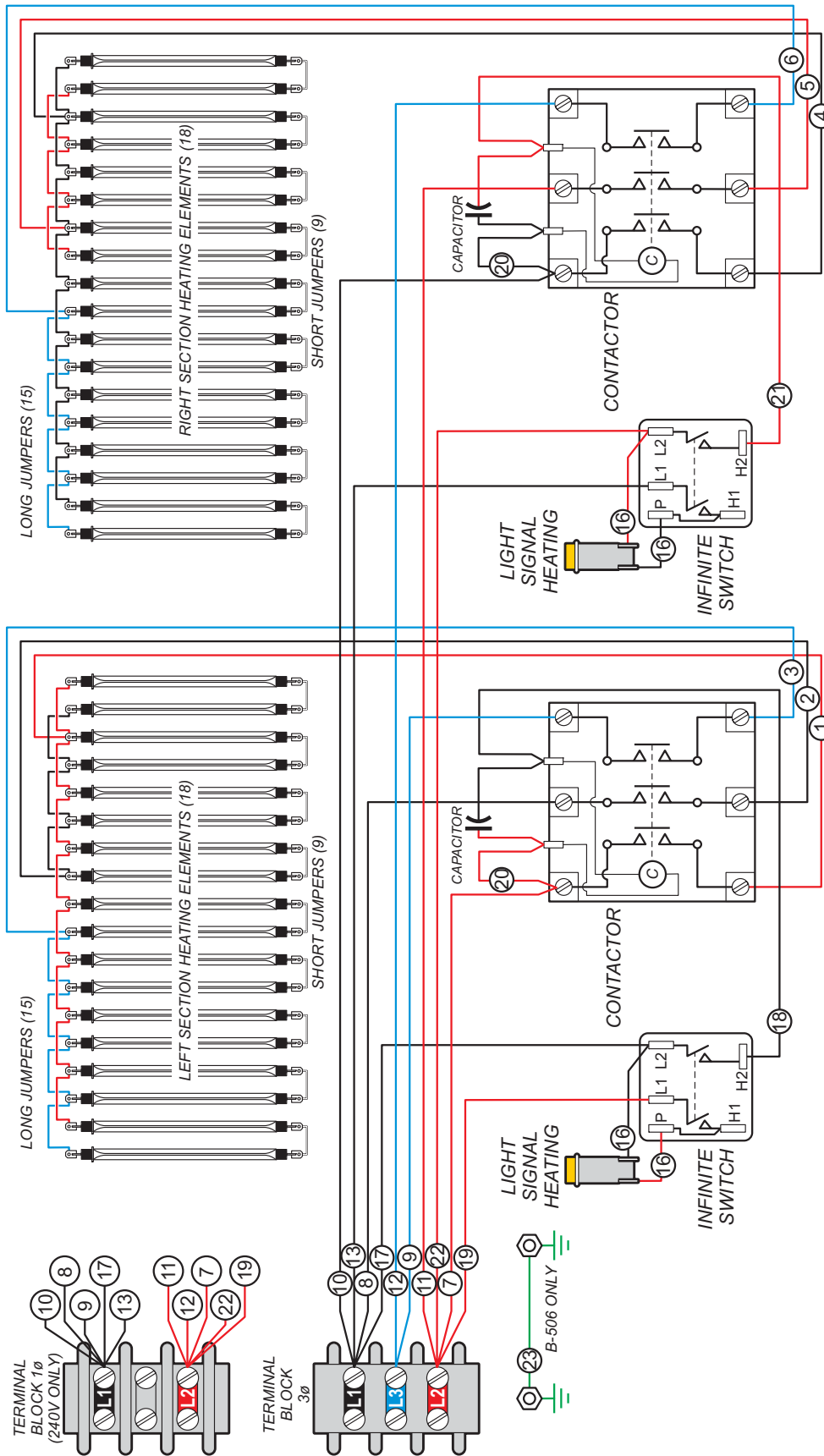
## WIRING DIAGRAMS (continued)



WIRING

# WIRING DIAGRAMS (continued)

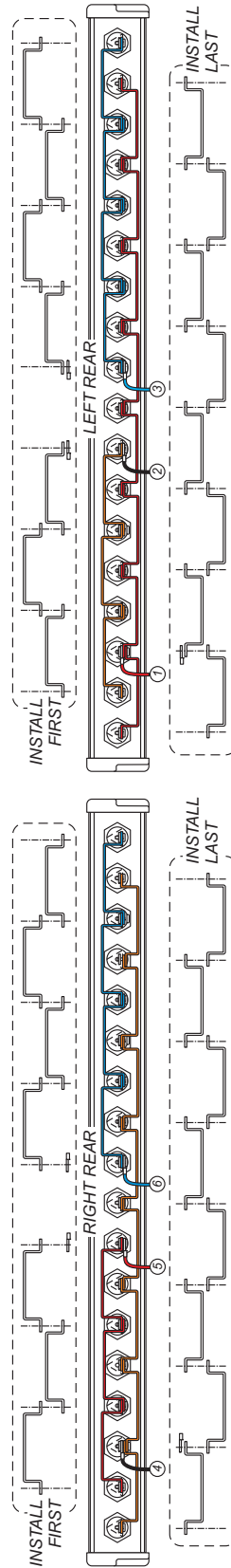
## WIRING



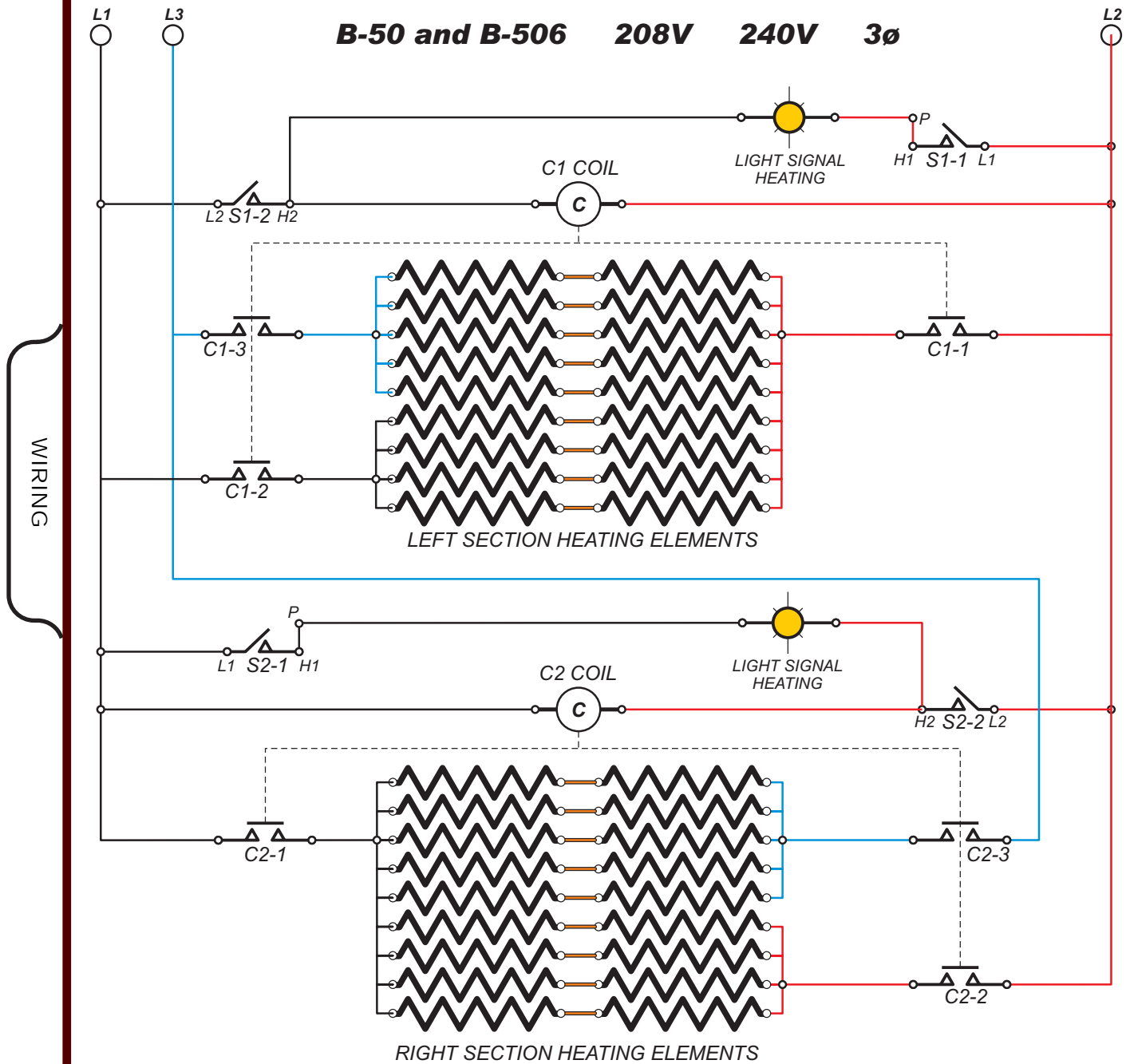
VOLTS	KW	NOMINAL AMPS PER LINE				
		AMPS 3ø			AMPS 1ø	
		L1	L2	L3		
208	10.8	30.0	30.0	30.0	-	-
240	10.8	26.0	26.0	26.0	45.0	45.0

**B-50 and B-506**  
**208V, 240V**  
 p/n 31226 issue S

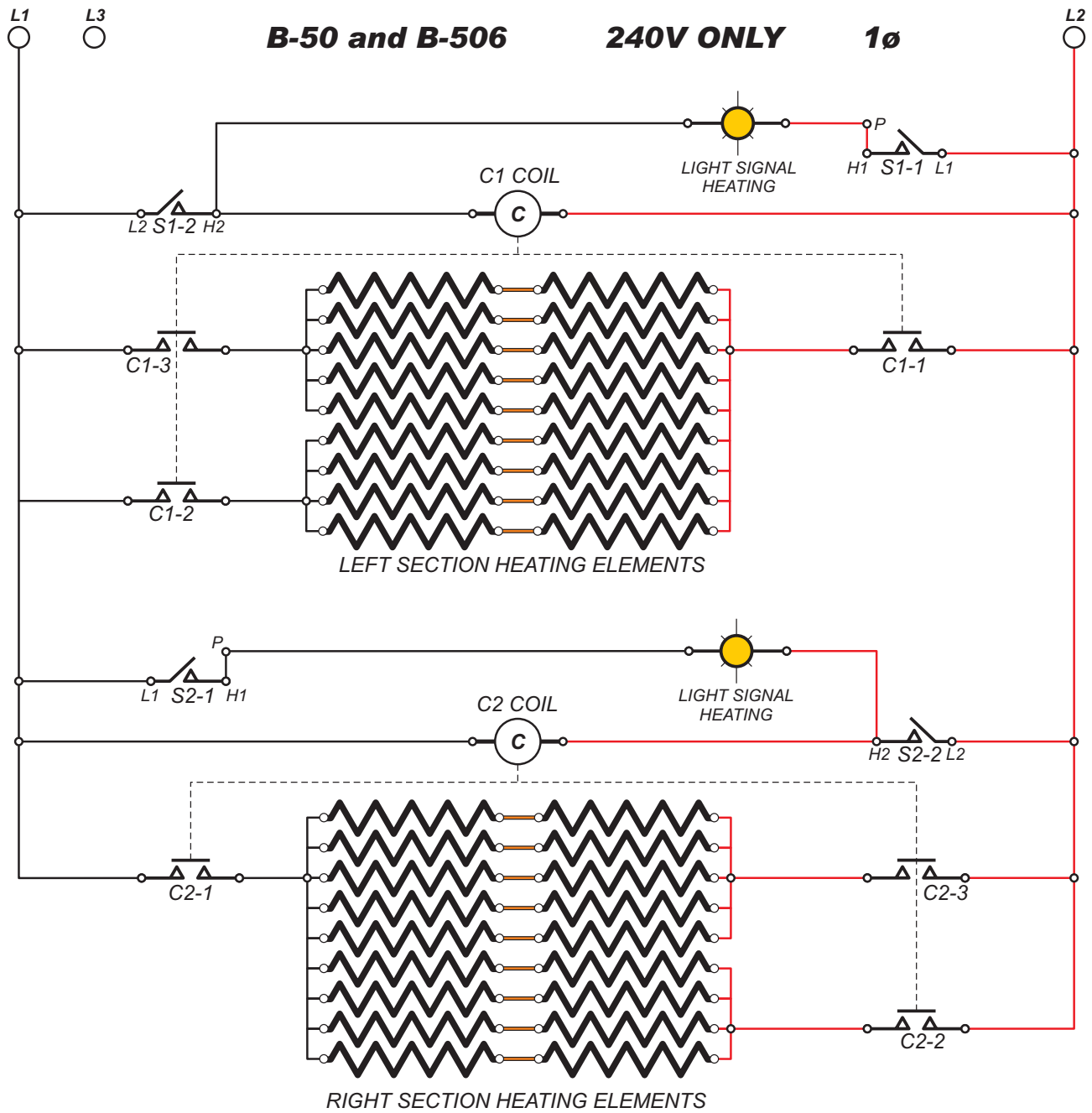
B-50 AND B-506 JUMPER INSTALLATION



## WIRING DIAGRAMS (continued)







WIRING

**IMPORTANT:** WELLS BLOOMFIELD PROPRIETARY INFORMATION.  
DISSEMINATION OF THIS INFORMATION TO ANYONE OTHER THAN  
WELLS AUTHORIZED SERVICE AGENTS IS STRICTLY PROHIBITED.  
TECHNICAL CONTENT OF THIS MANUAL IS DESIGNED FOR  
USE BY QUALIFIED PROFESSIONAL TECHNICIANS ONLY.



Wells Bloomfield proudly supports CFESA  
Commercial Food Equipment Service Association

**SERVICE TRAINING - QUALITY SERVICE**



**CUSTOMER SATISFACTION**



**WELLS BLOOMFIELD, LLC**  
2 ERIK CIRCLE, P. O. Box 280 Verdi, NV 89439  
telephone: 775-689-5703  
fax: 775-689-5976  
[www.wellsbloomfield.com](http://www.wellsbloomfield.com)

PRINTED IN UNITED STATES OF AMERICA